

## Domain Adaptation for LSTM Language Models

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Statistical language models predict the next word in a sentence, a task that has many applications such as machine translation, automatic speech recognition, auto-correction, ... The current state of the art in language modeling is based on artificial neural networks with memory that enables them to capture language phenomena across sentence boundaries. More abstract, long-distance phenomena such as the current topic of a conversation or domain of a text however still seem to present too large a challenge.

In this work we present the progress of our master thesis in which we attempt to find solutions for this challenge. We make a thorough analysis of the parameters involved in LSTM language models and propose domain-adaptive neural network architectures.

**Keywords:** language modeling – LSTM – domain adaptation